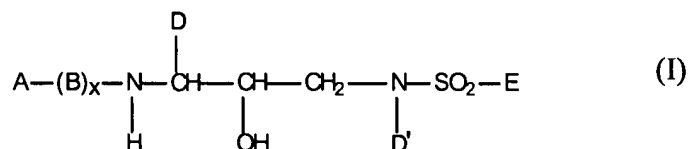


Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (currently amended): A compound of formula I:



wherein:

A is selected from the group consisting of $-\text{R}^1-\text{C}_1-\text{C}_6$ alkyl, which may be optionally substituted with one or more groups selected from the group consisting of hydroxy, C_1-C_4 alkoxy, $-\text{NR}^2-\text{CO}-\text{N}(\text{R}^2)(\text{R}^2)$ and $-\text{CO}-\text{N}(\text{R}^2)(\text{R}^2)$;

each R^1 is independently selected from the group consisting of $-\text{C}(\text{O})-$, $-\text{S}(\text{O})_2-$, $-\text{C}(\text{O})-\text{C}(\text{O})-$, $-\text{O}-\text{C}(\text{O})-$, $-\text{O}-\text{S}(\text{O})_2-$, $-\text{NR}^2-\text{S}(\text{O})_2-$, $-\text{NR}^2-\text{C}(\text{O})-$ and $-\text{NR}^2-\text{C}(\text{O})-\text{C}(\text{O})-$;

~~each Het is independently selected from the group consisting of C_3-C_7 cycloalkyl; C_5-C_7 cycloalkenyl; C_6-C_{10} aryl; and 5-7 membered saturated or unsaturated heterocycle, containing one heteroatom selected from N, $\text{N}(\text{R}^2)$, O, S and $\text{S}(\text{O})_n$, wherein~~

~~said heterocycle may optionally be benzofused; and wherein any member of said Het may be optionally substituted with one or more substituents selected from the group consisting of exo, -OR², -R², -N(R²)(R²), -R²-OH, -CN, -CO₂R², -C(O)-N(R²)(R²), -S(O)₂-N(R²)(R²), -N(R²)-C(O)-R², -C(O)-R², -S(O)_n-R², -OCF₃, -S(O)_n-Ar, methylenedioxy, -N(R²)-S(O)₂(R²), halo, -CF₃, -NO₂, Ar and -O-Ar;~~

each R² is independently selected from the group consisting of H and C₁-C₃ alkyl optionally substituted with Ar; with the proviso that when R² is C₁-C₃ alkyl substituted with Ar, said Ar may not be substituted with an Ar-containing moiety;

B, when present, is -N(R²)-C(R³)(R³)-C(O)-;

x is 0 or 1;

each R³ is independently selected from the group consisting of H, Het, C₁-C₆ alkyl, C₂-C₆ alkenyl, C₃-C₆ cycloalkyl and C₅-C₆ cycloalkenyl, wherein any member of said R³, except H, may be optionally substituted with one or more substituents selected from the group consisting of -OR², -C(O)-NH-R², -S(O)_n-N(R²)(R²), Het, -CN, -SR², -CO₂R², NR²-C(O)-R²;

each n is independently 1 or 2;

D and D' are independently selected from the group consisting of Ar; C₁-C₄ alkyl, which may be optionally substituted with one or more groups selected from C₃-C₆ cycloalkyl, -OR₂, -R³, -O-Ar and Ar; C₂-C₄ alkenyl, which may be optionally substituted with one or more groups selected from the group consisting of C₃-C₆

cycloalkyl, -OR², -R³, -O-Ar and Ar; C₃-C₆ cycloalkyl, which may be optionally substituted with or fused with Ar; and C₅-C₆ cycloalkenyl, which may be optionally substituted with or fused with Ar;

each Ar is independently selected from the group consisting of phenyl; 3-6 membered carbocyclic ring, wherein said carbocyclic ring may be saturated or unsaturated and optionally substituted with one or more groups selected from the group consisting of oxo, -OR², -R², -N(R²)(R²), -N(R²)-C(O)-R², C₁-C₃ alkyl substituted with -OH and optionally substituted with Ar, -CN, -CO₂R², -C(O)-N(R²)(R²), halo and -CF₃;

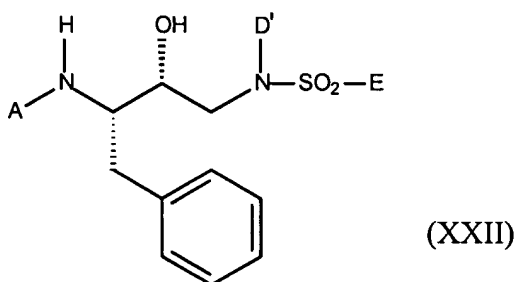
E is selected from the group consisting of Het; O-Het; Het-Het; -O-R³; -NR²R³; C₁-C₆ alkyl, which may be optionally substituted with one or more groups selected from the group consisting of R⁴ and Het; C₂-C₆ alkenyl, which may be optionally substituted with one or more groups selected from the group consisting of R⁴ and Het; C₃-C₆ saturated carbocycle, which may optionally be substituted with one or more groups selected from the group consisting of R⁴ and Het; and C₅-C₆ unsaturated carbocycle, which may optionally be substituted with one or more groups selected from the group consisting of R⁴ and Het; and

each Het is independently selected from the group consisting of C₃-C₇ cycloalkyl; C₅-C₇ cycloalkenyl; C₆-C₁₀ aryl; and 5-7 membered saturated or unsaturated heterocycle, containing one heteroatom selected from N, N(R²), O, S and S(O)_n, wherein said heterocycle may optionally be benzofused; and wherein any member of said Het

may be optionally substituted with one or more substituents selected from the group consisting of oxo, -OR², -R², -N(R²)(R²), -R²-OH, -CN, -CO₂R², -C(O)-N(R²)(R²), -S(O)₂-N(R²)(R²), -N(R²)-C(O)-R², -C(O)-R², -S(O)_n-R², -OCF₃, -S(O)_n-Ar, methylenedioxy, -N(R²)-S(O)₂(R²), halo, -CF₃, -NO₂, Ar and -O-Ar; and

each R⁴ is independently selected from the group consisting of -OR², -C(O)-NHR², -S(O)₂-NHR², halo, -NR²-C(O)-R² and -CN.

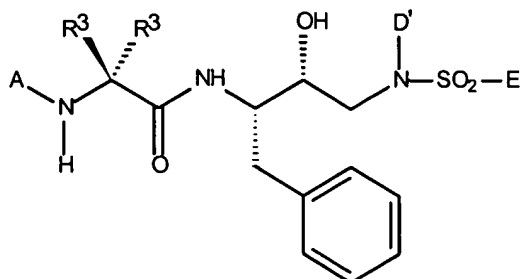
Claim 2 (original): The compound according to claim 1, characterized in that said compound has the structure of formula XXII:



and A, D' and E are defined as in claim 1.

Claim 3 (canceled).

Claim 4 (original): The compound according to claim 1, characterized in that said compound has the structure of formula XXXI:



(XXXI)

and A, R³, D' and E are defined as in claim 1.

Claim 5 (currently amended): A compound of formula I, wherein:

A is selected from the group consisting of -R¹-C₁-C₆ alkyl, which may be optionally substituted with one or more groups selected from the group consisting of hydroxy, C₁-C₄ alkoxy;

each R¹ is independently selected from the group consisting of -C(O)-, -S(O)₂-, -C(O)-C(O)-, -O-CO-, -O-S(O)₂- and -NR²-S(O)₂-;

~~each Het is independently selected from the group consisting of C₃-C₇ cycloalkyl; C₅-C₇ cycloalkenyl; C₆-C₁₀ aryl; and 5-7 membered saturated or unsaturated heterocycle, containing one heteroatom selected from N, O and S, which may optionally be benzofused; wherein any member of said Het may be optionally substituted with one or more substituents selected from the group consisting of oxo, -OR², -R², -N(R²)₂, -R²-~~

~~OH, CN, CO₂R², C(O)N(R²)₂ and S(O)₂N(R²)₂;~~

each R² is independently selected from the group consisting of H and C₁-C₃ alkyl;

B, when present, is -NH-CH(R³)-C(O)-;

x is 0 or 1;

R³ is selected from the group consisting of Het, C₁-C₆ alkyl, C₂-C₆ alkenyl, C₃-C₆ cycloalkyl and C₅-C₆ cycloalkenyl, wherein any member of said R³ may be optionally substituted with one or more substituents selected from the group consisting of -OR², -C(O)-NH-R², -S(O)_n-N(R²)₂, Het and -CN;

n is 1 or 2;

D and D' are independently selected from the group consisting of Ar; C₁-C₄ alkyl, which may be optionally substituted with C₃-C₆ cycloalkyl or Ar; C₂-C₄ alkenyl, which may be optionally substituted with C₃-C₆ cycloalkyl or Ar; C₃-C₆ cycloalkyl, which may be optionally substituted or fused with Ar; and C₅-C₆ cycloalkenyl, which may be optionally substituted or fused with Ar;

Ar is selected from the group consisting of phenyl; 3-6 membered carbocyclic ring wherein said carbocyclic ring may be saturated or unsaturated and optionally substituted with one or more groups selected from the group consisting of oxo, -OR², -R², -N(R²)₂, -N(R²)-C(O)R², -R²-OH, -CN, -CO₂R², -C(O)-N(R²)₂, halo and -CF₃;

E is selected from the group consisting of Het; -O-R³; -NR²R⁵; C₁-C₆

alkyl, which may be optionally substituted with one or more R^4 or Het; C_2 - C_6 alkenyl, which may be optionally substituted with one or more R^4 or Het; C_3 - C_6 saturated carbocycle, which may optionally be substituted with one or more R^4 or Het; and C_5 - C_6 unsaturated carbocycle, which may optionally be substituted with one or more R^4 or Het;

each Het is independently selected from the group consisting of C_3 - C_7 cycloalkyl; C_5 - C_7 cycloalkenyl; C_6 - C_{10} aryl; and 5-7 membered saturated or unsaturated heterocycle, containing one heteroatom selected from N, O and S, which may optionally be benzofused; wherein any member of said Het may be optionally substituted with one or more substituents selected from the group consisting of oxo, $-OR^2$, $-R^2$, $-N(R^2)_2$, $-R^2-OH$, $-CN$, $-CO_2R^2$, $-C(O)-N(R^2)_2$ and $-S(O)_2-N(R^2)_2$;

each R^4 is independently selected from the group consisting of $-OR^2$, $-C(O)-NHR^2$, $-S(O)_2-NHR^2$, halo and $-CN$; and

each R^5 is independently selected from the group consisting of H and R^3 .

Claim 6 (canceled).

Claim 7 (previously presented): The compound according to claim 1, wherein:

R^3 is selected from the group consisting of C_1 - C_6 alkyl, C_2 - C_6 alkenyl, C_5 - C_6 cycloalkyl, C_5 - C_6 cycloalkenyl and a 5-6 membered saturated or unsaturated heterocycle, wherein any member of said R^3 may optionally be substituted with one or more substituents selected from the group consisting of $-OR^2$, $-C(O)-NH-R^2$, $-S(O)_nN(R^2)(R^2)$, Het, $-CN$, $-SR^2$, $-C(O)_2R^2$, $NR^2-C(O)-R^2$; and

D' is selected from the group consisting of C₁-C₃ alkyl and C₃ alkenyl, wherein said alkyl or alkenyl may optionally be substituted with one or more groups selected from the group consisting of C₃-C₆ cycloalkyl, -OR², -O-Ar and Ar.

Claims 8-10 (canceled).

Claim 11 (original): The compound according to claim 1, wherein said compound has a molecular weight less than or equal to about 700 g/mol.

Claim 12 (previously presented): The compound according to claim 11, wherein said compound has a molecular weight less than or equal to about 600 g/mol.

Claims 13-17 (canceled).

Claim 18 (withdrawn): A method of using a compound according to any one of claims 1-2, 4-5 or 7 as a therapeutic agent against viral infection, said virus requiring an aspartyl protease for an obligatory life cycle event.

Claim 19 (withdrawn): The method according to claim 18, wherein said virus is HIV-1, HIV-2, or HTLV.

Claim 20 (withdrawn): A method of inhibiting enzymatic activity in an aspartyl protease comprising the step of contacting the aspartyl protease with a compound according to any one of claims 1-2, 4-5 or 7.

Claim 21 (withdrawn): The method according to claim 20, wherein said aspartyl protease is HIV protease.

Claim 22 (withdrawn): A method for preventing HIV infection in a mammal comprising the step of administering to said mammal a pharmaceutically effective amount of a compound according to any one of claims 1-2, 4-5 or 7.

Claim 23 (withdrawn): A method for treating HIV infection in a mammal comprising the step of administering to said mammal a pharmaceutically effective amount of a compound according to any one of claims 1-2, 4-5 or 7.

Claim 24 (withdrawn): The method according to claim 22 or 23, wherein said step of administering comprises oral administration or administration by injection.

Claims 25-27 (canceled).